



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------------|
| 10/802,426 | 03/17/2004 | Trevor Adrian | 15474.3.1.1 | 3868 |
| 22913 | 7590 | 12/20/2007 | | |
| WORKMAN NYDEGGER 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111 | | | EXAMINER LE, HUYEN D | |
| | | | ART UNIT 3751 | PAPER NUMBER |
| | | | MAIL DATE 12/20/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/802,426

Applicant(s)

ADRIAN, TREVOR

Examiner

Huyen Le

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-24, 27, 29-32, 34-39 and 41-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 1-10, 12-24, 27, 29-32, 34-39 and 41-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12-20, 21-24, 27, 29-31, 32, 34-39, 44 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolter (4,550,689).

The Wolter reference discloses a portable water heater comprising: a housing 1 having a plurality of walls 2-6; a heat transfer conduit 34 fluidly connected to a water source and configured to output heated water outside of the housing 1, the heat transfer conduit 34 configured into a coiled tube; and a fuel burner 24 (or 25 or 26) in thermal communication with the heat transfer conduit 34, the fuel burner 24 being entirely outside of the coiled tube 34, the fuel burner being positioned such that the flame of the fuel burner is substantially perpendicular to the coiled tube being directly heated (nothing between the coil 34 and the burner 24 except air so the coil 34 is directly above the burner 24).

Regarding claims 13, 24, the coiled tubing 34 is disposed about a horizontal axis in the housing 1.

Regarding claims 14, 21 and 34, since Fig. 15 of the present application shows a burner 346 one side of the coil 316, the fuel burner 24 of Wolter is situated in relation to

the heat transfer conduit 34 (as much as the burner 346 to the coil 316) so as to evenly distribute heat along the length of the heat transfer conduit 34.

Regarding claims 15, 35, the housing 1 further comprises a plurality of plates 17 and 18, the plurality of plates 17 and 18 being disposed about the heat transfer conduit 34 and fuel burner 24 and spaced apart from at least some of the plurality of walls 2-6 of the housing 1.

Regarding claims 16, 27 and 36, a pipe 30 attached to the back wall 2 constitutes one support rod disposed horizontally between two spaced apart vertical plates 18, wherein the heat transfer conduit is supported by the rod 30.

Regarding claims 17 and 37, the heat transfer conduit 34 is fluidly connected to an intake conduit 27 (Fig. 2).

Regarding claims 18, 29 and 38, the intake conduit would essentially be connected to a pump (col. 7, lines 40-44).

Regarding claims 19, 30 and 39, the heat transfer conduit 34 is fluidly connected to an outlet conduit 14, the outlet conduit 14 will be terminating at a shower head (col. 8, lines 52-56).

Regarding claims 20, 31, the upper surface 8 is the surface where the combusted gas is vented out (Fig. 2) so the surface 8 can be used for heating items while the portable water heater is in use.

Regarding claim 44, the housing 1 comprises a top wall 8 and a bottom wall 5, the top wall and bottom walls comprise openings 40-41.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1- 4, 6-10, 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolter (4,550,689) in view of Van Vliet (3,935,855).

Although Wolter does not disclose that each of the plurality of burners is independently operable, attention is directed to the Van Vliet reference which teaches a heating assembly having a plurality of burners 4, each of the burner 4 having a separate control.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Wolter heating system in view of the teaching of Van Vliet to have each of the burners 24-26 independently operable so that the heating of the water more precisely controlled.

Regarding claims 2-4, the coiled tubing 34 is disposed about a horizontal axis in the housing 1.

Regarding claim 6, the housing 1 further comprises a plurality of plates 17 and 18, the plurality of plates 17 and 18 being disposed about the heat transfer conduit 34 and fuel burner 24 and spaced apart from at least some of the plurality of walls 2-6 of the housing 1.

Regarding claim 7, a pipe 30 attached to the back wall 2 constitutes one support rod disposed horizontally between two spaced apart vertical plates 18, wherein the heat transfer conduit is supported by the rod 30.

Regarding claim 8, the heat transfer conduit 34 is fluidly connected to an intake conduit 27 (Fig. 2).

Regarding claim 9, the intake conduit would essentially be connected to a pump (col. 7, lines 40-44).

Regarding claim 10, the heat transfer conduit 34 is fluidly connected to an outlet conduit 14, the outlet conduit 14 will be terminating at a shower head (col. 8, lines 52-56).

Response to Arguments

5. Applicant's arguments filed 10/02/2007 have been fully considered but they are not persuasive.

6. Regarding applicant's arguments that any heating of the coil 34 in Wolter is due to residual heat which is the leftover or remainder of the heat coming off the coils 31-33, and therefore, the coil 34 is not in direct thermal communication with the fuel burner, examiner disagrees with applicant. The coil 34 in Wolter not only gets the residual heat from each of the coils 31-33 and but also from each of the burner nozzles 24-26. Since there is no blockage between the tops of the burner nozzles 24-26 and coil 34, coil 34 is essentially considered to be in direct thermal communication with burner nozzles.

Wolter meets the claimed limitations.

7. Regarding applicant's arguments with respect to claim 21 that none of the nozzles in Wolter is entirely outside and in direct thermal communication with a heat transfer conduit, examiner disagrees with applicant. Examiner interprets the heat coil in Wolter being a member 34 which is entirely outside the burner nozzle 31. The coil 34 is in direct thermal communication with burner nozzle 31 because there is no blockage between the tops of the burner nozzles 24-26 and coil 34. Wolter discloses an electric solenoid gas valve. This valve is not on/off valve. Thus, it would incrementally operate the burner nozzle (i.e. turning the valve on gradually).

8. Regarding applicant's arguments with respect to claim 31 that none of the nozzles in Wolter is in direct thermal communication with a heat transfer conduit, examiner disagrees with applicant for similar reasons stated in paragraph 6 above.

9. Regarding applicant's arguments that there is no suggestion to combine the teachings of Wolter and Vliet in patents, two references are non-analogous art and (even the suggested combination made) the combination does not teach all of the limitations "each of the plurality of fuel burners is entirely outside of each of the at least one heat transfer conduit" as recited in claim 1, examiner disagrees with applicant. First of all, the suggestion does not have to be in the patents. In this case, it would be in the knowledge of one skill in the art at the time the present application of made (not at the time of Wolter's application). Wolter and Vliet are in fact in the heating art. Finally, each of the burner nozzles 24-26 is entirely outside of the heat transfer conduit 34.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Le whose telephone number is 571-272-4890. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/802,426
Art Unit: 3751

Page 8

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Huyen Le
Primary Examiner
Art Unit 3751